



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,766	06/21/2006	Thomas Jaetsch	CH-8458/CHS03 1011	8750
34947	7590	10/08/2010		
LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112			EXAMINER BECKHARDT, LYNDSEY MARIE	
			ART UNIT 1613	PAPER NUMBER
			MAIL DATE 10/08/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,766	Applicant(s) JAETSCH ET AL.	
	Examiner LYNDSEY BECKHARDT	Art Unit 1613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,10-19,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 5-6 and 21-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-3, 5-6, 10-19 and 21-22 are currently pending. Claims 3, 5-6 and 21-22 are currently under examination.

Declaration

The Declaration under 37 CFR 1.132 filed 08/19/2010 is insufficient to overcome the rejection of claims 3, 5-6 and 21-22 based upon 35 U.S.C. 103 as set forth in the last Office action. The declaration will be addressed in combination with arguments below.

Response to Arguments

Applicant's arguments, filed 08/19/2010, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Maintained Rejections:

Claim Rejections - 35 USC § 112 - New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

Art Unit: 1613

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 21 and 22 recite 'combinations thereof' in the last line of each claim. The instant specification provides no support for combinations of boron compounds, see instant specification, page 9, lines 4. The instant specification provides no support for combinations of quaternary ammonium compounds, see instant specification, page 7, line 26 to page 8, line 1.

Response to Arguments:

Applicant argues as set forth in the specification "if appropriate, the active compound of the formula (I) can be employed in combination with at least one other active compound from the group of the insecticides or fungicides, to widen the activity spectrum or achieve particular effects..." (page 7, lines 15-18). Applicants go on to provide examples of such insecticides and fungicides. Applicant argues it is not necessary that the application describe the claimed invention in *ipsis verbis*; all that is required is that it reasonably conveys to persons skilled in the art that, as of the filing date thereof, the invention had possession of the subject matter later claimed. As clearly provided in Applicant's specification, "at least one other active compound" fully supports the presently claimed combinations thereof.

In response, the wording of the instant specification "at least one other active compound from the group of insecticides or fungicides" allows for the addition of an insecticide, a fungicide or a combination of insecticide and fungicide. The wording of

Art Unit: 1613

the instant specification does not convey to a person of ordinary skill that multiple insecticides or multiple fungicides were contemplated at the time of the invention.

Modified Rejections:

The following rejections are modified based on Applicant's amendments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

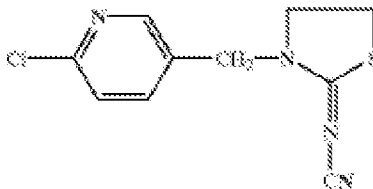
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3 and 5 are rejected under 35 U.S.C. 102(a/e) as being anticipated by US 2003/0149080 (publication date: 08/07/2003).

The '080 publication teaches a composition for controlling plant pests, which contain the compound of formula (I):



(abstract)

Art Unit: 1613

in mixture with fungicidally active compounds (abstract). The additional fungicidally active compound can be chosen from a list which includes cyproconazole, propiconazole and tebuconazole (page 8-9, paragraph [0071]). The mixtures show synergistic effect (page 9, paragraph [0072]). In generation 0.1 to 10 parts by weight, preferably 0.3 to 3 parts by weight of at least one fungicidal active compound are present per part by weight of the active compounds of the formula (I) (page 9, paragraphs [0074] to [0075]). The active compound combinations according to the invention are particularly suitable for controlling fungal attack (page 9, paragraph [0077]). The active compound combination according to the invention can be converted into customary formulations, such as solutions, emulsions and suspensions (page 10, paragraph [0098]). The active components can be mixed with extenders, that is liquid solvents, liquified gases under pressure and/or solid carriers. If the extender used is water, it is also possible to use, for example, and organic solvents as auxiliary solvents (page 10, paragraph [0099]). It is also possible to add trace nutrients, such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc (page 10, paragraph [0101]). The formulation generally comprises between 0.1 and 95 percent by weight of active compound (page 10, paragraph [0102]). In the formulation the active compound combinations according to the invention can be present as a mixture with other known active compounds, such as fungicides and insecticides (page 10, paragraph [0103]). The formulation can be prepared as ready-to-use solutions or concentrates (page 10, paragraph [0104]). It has been found that the active compound combination according to the invention have a potent insecticidal action against insects which destroy industrial

Art Unit: 1613

materials, such as beetles and termites (page 10, paragraphs [0109], [0111], [0115]).

Industrial materials are understood to be e.g. timber products. The materials to be protected against attack by insects are very particularly wood and timber products (page 11, paragraphs [0118] and [0119]). The insecticidal compositions or concentrates used for the protection of wood and wooden materials comprise the active compound according to the invention at a concentration of 0.0001 to 85% by weight, in particular 0.01 to 60% by weight (page 11, paragraph [0123]).

Regarding claim 3, the '080 publication teaches a formulation comprising the active compound in of Formula (I), boron and a solvent/diluent.

Regarding claim 5, the '080 publication teaches the formulation additionally containing fungicidally active compounds.

Regarding claim 6, the '080 publication teaches the active component being present from 0.0001% to 85%.

Response to Arguments:

Applicant argues trace nutrients are plant micronutrients. This means that they are only present in very small quantities necessary for a plant's health. As such, '080 publication's disclosure of micronutrients fails to disclose the use of a boron compound as an insecticidally or fungicidally active compound, and therefore fails to anticipate claim 3 as presently amended.

In response, the presently rejected claims contain no limitations directed to the amount of the boron compound that must be present. The '080 publication teaches the structural features of the claims, the active compound of formula (I) and a boron

Art Unit: 1613

compound present in the composition and therefore would exhibit the function features of being insecticidally or fungicidally active, absent factual evidence to the contrary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

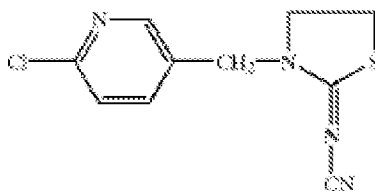
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 5-6, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0149080 (publication date: 08/07/2003) in view of EP 1025967 (publication date: 08/09/2000).

The '080 publication teaches a composition for controlling plant pests, which contain the compound of formula (I):



(abstract)

in mixture with fungicidally active compounds (abstract). The additional fungicidally active compound can be chosen from a list which includes cyproconazole, propiconazole and tebuconazole (page 8-9, paragraph [0071]). The mixtures show synergistic effect (page 9, paragraph [0072]). In generation 0.1 to 10 parts by weight, preferably 0.3 to 3 parts by weight of at least one fungicidal active compound are present per part by weight of the active compounds of the formula (I) (page 9, paragraphs [0074] to [0075]). The active compound combinations according to the invention are particular suitable for controlling fungal attack (page 9, paragraph [0077]). The active compound combination according to the invention can be converted into customary formulations, such as solutions, emulsions and suspensions (page 10, paragraph [0098]). The active components can be mixed with extenders, which are liquid solvents, liquified gases under pressure and/or solid carriers. If the extender used

Art Unit: 1613

is waters, it is also possible to use, for example, and organic solvents as auxiliary solvents (page 10, paragraph [0099]). It is also possible to add trace nutrients, such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc (page 10, paragraph [0101]). The formulation generally comprises between 0.1 and 95 percent by weight of active compound (page 10, paragraph [0102]). In the formulation the active compound combinations according to the invention can be present as a mixture with other known active compounds, such as fungicides and insecticides (page 10, paragraph [0103]). The formulation can be prepared as ready-to-use solutions or concentrates (page 10, paragraph [0104]). It has been found that the active compound combination according to the invention have a potent insecticidal action against insects which destroy industrial materials, such as beetles and termites (page 10, paragraphs [0109], [0111], [0115]). Industrial materials are understood to be e.g. timber products. The materials to be protected against attack by insects are very particularly wood and timber products (page 11, paragraphs [0118] and [0119]). The insecticidal compositions or concentrates used for the protection of wood and wooden materials comprise the active compound according to the invention at a concentration of 0.0001 to 85% by weight, in particular 0.01 to 60% by weight (page 11, paragraph [0123]).

The '080 publication does not teach the boron compounds found in instant claim 21 or the formulation comprising a quaternary ammonium compound.

The '967 publication teaches wood preservatives on the basis of boric acid and quaternary ammonium compounds as well as method to protect wood using the agents of the invention (page 1, paragraph [0001]). It is known that boric acid, its salts and

Art Unit: 1613

complex borates are used for the protection of wood and wood products against wood destructive fungi and insects (page 1, paragraph [0002]). Quaternary ammonium compounds are also known to protect wood and wood products against fungi and insects (page 1, paragraph [0003]). The object of the invention is to make a wood preservative which prevents fungi and wood-damaging insects, specifically beetles (page 1, paragraph [0005]). The formulation contains boric acid, a quaternary ammonium compound, a wetting agent, water and at least one other fungicide (page 1, paragraph [0009]). Specific examples of fungicides include cyproconazole, propiconazole and tetraconazole (page 2, paragraph [0011]). Examples include boric acid and didodecylmethyl polyoxyethyl ammonium propionate (page 2, paragraph [0013], [Example 1] and page 3, [Example 2]).

It would be prima facie obvious to one of ordinary skill in the art at the time the invention was made to use boric acid and didodecylmethyl polyoxyethyl ammonium propionate in the pest controlling formulation taught by the '080 publication because the '080 publication teaches a formulation used to treat industrial material such as wood including the compound of Formula in combination with a fungicidally active compounds and additional fungicides and insecticides can be included in the formulation and the '967 publication teaches a formulation used to prevent insect and fungus formation comprising boric acid, a quaternary ammonium compound and further includes at least one other fungicide. One of ordinary skill in the art at the time the invention was made would have a high expectation of success in using boric acid and didodecylmethyl polyoxyethyl ammonium propionate taught by the '967 publication in the formulation

Art Unit: 1613

taught by the '080 publication because the '967 publication and the '080 are both directed to wood treating compositions for the prevention of fungus growth and insects and have overlapping fungicidal ingredients, such as cyproconazol, propiconazol and tetraconazol.

"It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). The active ingredients in the '080 publication and the '967 publication are taught to be used on wood to prevent fungus growth and insects. Both the '080 publication and the '967 publication allow for additional fungicides/insecticides in their formulations. It would be obvious to one of ordinary skill in the art at the time the invention was made the active ingredients in the '080 publication and the '967 publication can be combined to form a wood protecting composition which prevents fungus formation and insects.

Regarding claim 3, the '080 publication teaches the compound of Formula I used in combination with a fungicidally active compound. The '967 publication teaches formulation containing boric acid and a quaternary ammonium compound.

Regarding claim 5, the '080 publication teaches the formulation additionally containing fungicidally active compounds.

Regarding claim 6, the '080 publication teaches in generation 0.1 to 10 parts by weight, preferably 0.3 to 3 parts by weight of at least one fungicidal active compound

Art Unit: 1613

are present per part by weight of the active compounds of the formula (I) (page 9, paragraphs [0074] to [0075]). The '967 publication teaches boric acid present at 21% and benzalkonium chloride present at 6.2%. It would be prima facie obvious to one of ordinary skill in the art to use the boric acid and/or the benzalkonium chloride active agent in the amounts taught by the '967 publication and further optimize through routine experimentation.

Regarding claim 21, the '967 publication teaches boric acid.

Regarding claim 22, the '967 publication teaches didecylmethyl polyoxyethyl ammonium propionate.

Response to Arguments:

Applicant argues it has long been established, however, that such a combination of elements as is used in the rejection does not render a synergistic result obvious (i.e., where the claimed combination does more than merely perform the function that each element performs separately, the same is non-obvious). The declaration under 37 CFR 1.132 shows unexpected synergistic results. As provided in Tables A and B, there are synergistic combinations of thiacloprid/benzalkonium chloride and thiochlopride/boric acid, respectfully. Both show synergistic effect as compared to each active alone.

In response, the data provided in the declaration has been reviewed, and found persuasive for the specific examples given of the combination of thiacloprid/benzalkonium at the shown percentages and thrioclopride/boric acid at the shown percentages. The data presented, however, is not commiserate in scope with the instant claims. The instant claims are directed to the compound in formula (I) in any

Art Unit: 1613

concentration, combined with any quaternary ammonium compound or boron compound, at any concentration. The instant claims are directed to where an insecticidally and fungicidally active compound is present. Dependent claims further limit, however are still not commiserate in scope with the presented data. The unexpected synergistic results presented are directed to two specific compounds that are separately combined with the compound of formula I at a specific concentration. The instant claims are much broader in scope than the data presented. The rejection is therefore maintained until the scope of the unexpected results is the same as the instant claims.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1613

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYNDSEY BECKHARDT whose telephone number is (571)270-7676. The examiner can normally be reached on Monday thru Thursday 7:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Kwon can be reached on (571) 272-0581. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LYNDSEY BECKHARDT/
Examiner, Art Unit 1613

/YONG CHU/
Primary Examiner, Art Unit 1626